



Epistemic Injustice

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How epistemic injustice in the global health arena undermines public health care delivery in Africa.



Epistemic Injustice

- Epistemology (επιστήμολογία) [f. Gr. ἐπιστήμη knowledge + -λογία discoursing (see -logy).] • The theory or science of the method or grounds of knowledge.
- Using the West African 2014 Ebola epidemic as an example of how *scientific theories can create injustice*.
- Based on:
 - Lauer H. How epistemic injustice in the global health arena undermines public health care delivery in Africa. *Theoretical Medicine and Bioethics*. 2016.
 - Crowe D. “Ebola Ça Suffit!” is not enough to Prove Efficacy of an Ebola Vaccine. *American Journal of Immunology*. 2017 Jul 4; 13(3): 165–72.



Crisis Response

Soldiers, Space suits, Disinfectants

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Soldiers

What do we need? Soldiers. When do we need them? Now!





Space Suits and Disinfectants

- Locals are dangerous, Ebola is dangerous, I wouldn't dress like this if it wasn't true.





Western Control

Words are needed to disguise the fact that the west is still in control



Western Superiority

- “the pretense is maintained that Africans require foreign technical expertise, initiative, and wherewithal to command and control epidemic management both during crisis alerts and in quiet periods of preventative research and product development” (Lauer)
- The best laboratories in Africa are only suitable for preparing samples for shipping, so western scientific control continues.



Blame it on the Africans

- “According to representatives of the most highly revered health care agencies in the world (Médecins sans Frontières, for example) the misfortunes that occur in the course of dealing with health crises in Africa are attributable to the failure of African governments to comply with global health authorities, to crippling local incapacities, to cross-border problems of logistics, and to the ravages of nature’s own wily pathogens. What’s prejudice got to do with it?” (Lauer)
- “One general consequence of dismissing scientific peers based upon their geographic location or their independent standpoint is the suppression of epistemic diversity. Philip Kitcher and others have stressed that diversity is crucial for the pursuit of factive, as Amartya Sen recognised it to be crucial for the pursuit of justice” (Lauer)



Don't blame Westerners

- “A further source of mayhem and distrust in Guinea was caused in October 2014 by an outbreak of acute fulminating Meningococcal Septicemia, resulting from mistaken use of overheated vials in a meningitis inoculation campaign organized by the US Centre for Diseases Control. Since the CDC’s error was not publicized, the violent symptoms were alleged to be caused by Ebola”
- A local doctor’s strike in Freetown during the epidemic was characterized as utter selfishness but was actually due to the UK opening an Ebola clinic...open only to UK expatriates.
- A GlaxoSmithKline/NIH vaccine in Ghana was protested due to the known dangers of the chimpanzee adenovirus vector resulting in the withdrawal of the virus. But GSK just got their 30,000 participants in other African countries.



Non-believers

- A surprising number of locals didn't believe the Ebola epidemic was real.





Ebola Disease Model

A symptom, a contact, a test



Symptoms

- (1977) “Those severely affected had epistaxis [nosebleed], subconjunctival haemorrhages, haemoptysis [coughing blood], hsematemeses [vomiting blood], and melaena [blood from both ends]. Some patients also had a body rash, tremors, and convulsions.”
- (2014) “Elevated body temperature or subjective fever or symptoms, including severe headache, fatigue, muscle pain, vomiting, diarrhea, abdominal pain, or unexplained hemorrhage” (CDC case definition)
- “Ebola’s very definition changed [from 1977’s] Ebola Haemorrhagic Fever (EHF) Ebola Virus Disease (EVD)...in 2014. In a study of 44 Ebola patients conducted in Sierra Leone in 2014 [Schieffelin], only one patient had bleeding recorded as a symptom.” (Lauer)
- 6 of 9 CDC Ebola symptoms were recorded as potential vaccine side effects during the sole vaccine trial (Crowe).

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Popular understanding





Actual victims

- Sick, but obviously not with hemorrhagic fever.





Contact

- Contact with an Ebola is critical for diagnosis.
- This gives the false impression that the disease is infectious.



Test

Tests for Ebola are highly unreliable, but if tests are restricted to sick people with contact with a previous Ebola victim all positives can be taken as true positives.

- “A 3-year study in Gabon involving nearly 5,000 healthy individuals [Becquart] established the utter unreliability of the tests that were used throughout the 2014-5 outbreak to confirm suspected cases of Ebola. According to WHO, as of November 2015 at the end of the outbreak, a reliable test for diagnosing Ebola was still unknown and remained a focus of intense collaborative exploration.” (Lauer)
- “some ELISA-based serosurveys have shown high antibody prevalence rates among populations living in areas where no cases of EHF [Ebola Hemorrhagic Fever] have ever been reported...The IgG seroprevalence was 9.3% in villages located in the 1995 outbreak area around Kikwit, DRC, where no EHF cases were reported. Likewise, a seroprevalence of 13.2% was found in the Aka Pygmy population of Central African Republic, where no ZEBOV outbreaks have ever been reported...older studies based on less-specific immunofluorescence assays showed an antibody prevalence of around 10% in several non epidemic parts of Africa...a more recent survey showed a low anti-ZEBOV IgG prevalence (1.4%) among 979 people living in the northern region of Gabon that experienced EHF outbreaks between 1994 and 1997...[The present] survey lasted 3 years and covered 4,349 individuals from 220 randomly selected villages, representing 10.7% of all villages in Gabon. Using a sensitive and specific ELISA method, we found a ZEBOV-specific IgG seroprevalence of 15.3% overall, the highest ever reported... significantly higher in forested areas (19.4%) than in...grassland (12.4%), savannah (10.5%), and lakeland (2.7%). No other risk factors for seropositivity were found” (Becquart, 2010)



Statistics

- “the WHO predicted publicly that by the end of 2014, the number of new Ebola cases could reach 5,000 to 10,000 per week. **The CDC released its predictions through Associated Press and Reuters that by mid-January 2015 there would be almost 1.4 million cases of Ebola through West Africa.** When such projections later proved absurd, these errors were never accounted for nor retracted.” (Lauer)
- Most cases in Ghana in the “Ebola ça Suffit! vaccine trial were in the trial.
- The CDC and WHO reported 3,769 cases by the end of 2014, but could not break those down by gender, age, symptoms etc.

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Financial Interests



Vaccine



Vaccines or Sanitation

- Most Africans don't have a clean water supply, causing diarrhea and other health problems.
- Solution 1: Municipal water treatment.
- Solution 2: Blame the diarrhea (not the only health effect) on a virus (rotavirus) and produce a vaccine.
- Solution 3: Call it Ebola and provide a vaccine
- Chose solutions: 2 and 3.
- WHO got Ebola vaccine approved for use by declaring an outbreak in the DRC, allowing the use of experimental medications.



Rotavirus Vaccine

NCBI Resources

Forbes



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On 29 October 2012, Malawi officially launched the Rotavirus vaccine children under one year of age. The launch took place in Ntchisi district, central Malawi and the guest of honor was the Vice President of the Republic of Malawi and Minister of Health, Right Honorable Khumbo Kachali. Malawi is the fourth GAVI-eligible country in Africa to roll out rotavirus vaccine in the national immunization schedule, following the footsteps of Sudan, Ghana and Rwanda.

The occasion was also graced by the presence of dignitaries from WHO, UNICEF, Clinton Health Access Initiative (CHAI), USAID, cabinet ministers, members of parliament, the Principal secretary in the ministry of health, and senior government officials.

three patients, so crowded is the ward.

Many of the children are attached to intravenous drips that replace the essential fluids they have lost as a result of severe diarrhoea.

But Senior Paediatrician Dr. Elfakey is happy.

Although diarrhoea is one of the most serious child health problems in Sudan, he is looking forward to a time very soon when this ward will be far less crowded.



Click image to enlarge

Two month-old Mohammed Ali has just had his first rotavirus vaccine dose. His mother is delighted he will be protected against the leading cause of severe infant diarrhoea.



Different Ethical Standards in Africa

- “Under contract with GlaxoSmithKline and the US National Institutes of Health, and with the eventual approval of the World Health Organization, mass experimentation of a new vaccine involving healthy humans had commenced months before in Ghana without pursuing prior statutory approval by the local Food and Drug Advisory. Alarm was first raised by nursing students who were inducted as volunteers without the opportunity of providing informed consent. Worrying rumors scampered into news headlines about the potential dangers of the vector method used, known as the chimpanzee adenovirus type 3 whose safety in previously published studies was drawn into question. An independent body of public health practitioners and researchers with the relevant expertise took up their statutory advisory role for the Ghana government on behalf of public interest in technical matters of immunological detail. A political furore arose, during which the credibility, motivation, responsibility and sanity of the local technical team of scientists were challenged. The GSK|NIH initiative disappeared during the hiatus created by the Ghanaian Parliament’s debating the issue, but not because laws had been broken and public safety put at possible risk, but because in the meantime GlaxoSmithKline had completed its Phase II Trials by collecting the required quota of 30,000 samples from other West African countries.”



Drugs

- “In 2008, the United Nations’ World Health Assembly deemed it appropriate that multinational drug manufacturers’ marketing specialists should decide which of their shelved products to repurpose as ‘essential medicines’ for Africans.”
- Drugs for Ebola play second fiddle to vaccines. The market is much smaller.



Conclusions

- Just as charity can make problems worse, so can misapplied scientific knowledge – epistemic injustice.
- “Ebola tests would never be administered in the United States until typhoid, diabetic shock, and malaria had been definitely ruled out. But in West Africa typhoid and malaria are endemic; so one is unlikely to find any adult who is not carrying antibodies for typhus or who is not carrying some level of malarial parasites. Thus diagnostic uncertainties prevail in the tropics.” (Lauer)
- Would we in the west care if it wasn’t an infection we feared could break out and kill us?



Over to Joan Shenton...

Joan Shenton has written a commentary on Helen Lauer's academic paper in which she compares the approaches to HIV/AIDS, which she derived from several visit to Africa, with the later Ebola outbreak